An example of late regression of in-stent restenosis after bare metal coronary stenting

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Figure 1. A) Coronary angiography demonstrating significant stenosis of the mid LAD. B) Angiographic result after PCI. C) Coronary angiography six months after index PCI demonstrating moderate in-stent restenosis. D) Coronary angiography 55 months after the index PCI demonstrating significant regression of in-stent restenosis.

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A 69-year-old female patient with hypertension and diabetes mellitus presented in September 2002 with an acute coronary syndrome. Coronary angiography demonstrated significant one-vessel disease (figure 1A) with a preserved left ventricular function. Percutaneous coronary intervention (PCI) of the left anterior descending coronary artery with the use of a bare metal coronary stent (BMS) (Express²TM) was performed (figure 1B). Six months after the index PCI, she was re-admitted with complaints of dyspnoea and chest pain. To exclude in-stent restenosis (ISR) as the

cause of her symptoms, coronary re-angiography was performed. The coronary angiogram showed moderate ISR and no other significant coronary stenosis (figure 1C). After several years without any symptoms she visited the outpatients clinic in 2007 with complaints of exercise-related dyspnoea and chest pain. Single photon emission computed tomography was suggestive for reversible myocardial ischaemia located anteriorly. To our surprise, repeated coronary angiography demonstrated significant regression of the ISR without any atherosclerosis progression elsewhere in the coronary tree (figure 1D).

Discussion

Late regression of ISR in BMS has previously been described and occurs typically between six months and three years after implantation.¹ ISR in BMS is caused by excessive neointimal hyperplasia and late regression of this ISR has been related to a decrease in extracellular matrix and fibrotic maturation of this neointimal hyperplasia over time.¹ With the introduction of drug-eluting stents (DES) the incidence of ISR has been reduced, however to our knowledge late regression of DES ISR has not been reported. The present case is a good angiographic illustration of late regression of BMS in-stent restenosis.

Acknowledgment

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Reference

- 1 Kimura T, Yokoi H, Nakagawa Y, Tamura T, Kaburagi S, Sawada Y, et al. Three-year follow-up after implantation of metallic coronary-artery stents. *N Engl J Med* 1996;**334**:561-6.

In this section a remarkable 'image' is presented and a short comment is given.

We invite you to send in images (in triplicate) with a short comment (one page at the most) to Bohn Stafleu van Loghum, PO Box 246, 3990 GA Houten, e-mail: l.meester@bsl.nl.

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